DOCUMENT RESUME

ED 356 083 PS 021 328

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TITLE Observing Parent Behavior: Reconciling Theoretical Concepts with Empirical Reality.
SPONS AGENCY John D. and Catherine T. MacArthur Foundation, Chicago, IL.; National Inst. of Mental Health (DHHS), Bethesda, Md.; National Inst. on Drug Abuse (DHHS/PHS), Rockville, Md.
PUB DATE Mar 93
CONTRACT DA05347; MH00567; MH43270; MH48165
NOTE 49p.; Paper presented at the Biennial Meeting of the Society for Research in Child Development (New Orleans, LA, March 25-28, 1993).
PUB TYPE Speeches/Conference Papers (150) -- Reports - Research/Technical (143)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Adolescent Development; *Adolescents; *Behavior Problems; *Child Behavior; Child Rearing; Elementary Education; Longitudinal Studies; *Parent Child Relationship; *Parents; Predictive Measurement; Psychological Patterns
IDENTIFIERS Parent Behavior Rating

ABSTRACT

Using data from the Iowa Youth and Families Project, this longitudinal study investigated the predictive validity of different dimensions of observed parent behavior on adolescent externalizing (aggression, hostility) and internalizing (depression, anxiety) problems over a 2-year period. In addition, the study examined how observer ratings functioned differently from child and parent self-reports. Families with a seventh grader and a sibling within 4 years of age of the seventh grader were recruited. Interviewers visited each family at home for approximately 2 hours on each of 2 occasions in 1989, 1990, and 1991. During the first visit, each of the four family members completed questionnaires. During the second visit, occurring within 2 weeks of the first, family members were videotaped as they engaged in several different structured interaction tasks. Family members' recorded behaviors were subsequently coded. Analysis revealed that observed parent behavior predicted adolescent developmental outcomes, particularly externalizing symptoms. Two general domains of parenting, affect and discipline, were correlated. Results also demonstrated the predictive validity of separate dimensions of observed parent behavior, particularly hostile-harsh and firm-involved parenting practices. An appendix provides definitions of 16 codes used to assess parent behavior. Three tables of data and eight figures are included. (MM)

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ED356083

Observing Parent Behavior: Reconciling Theoretical Concepts with Empirical Reality

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In S. T. Hauser (Chair) and J. P. Allen (Co-Chair),

From Conceiving to Coding Contexts of Adolescent Development: Theoretical Scaffoldings of Family Interaction Coding Systems.

Symposium conducted at the biennial meeting of the Society for Research in Child Development, New Orleans, Louisiana,

March 25-28, 1993

PS 021328

This paper is based on collaborative research involving the Iowa Youth and Families Project at Iowa State University, Ames, Iowa, and the Social Change Project at UNC-Chapel Hill. The combined research effort is currently supported by the National Institute of Mental Health (MH48165 and MH43270), The National Institute on Drug Abuse (DA05347), the John D. and Catherine T. MacArthur Foundation Program for Successful Adolescent Development among Youth in High-Risk Settings, and a Research Scientist Award (MH00567).

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Observing Parent Behavior: Reconciling Theoretical Concepts with Empirical Reality

Parent behavior plays an important etiological role in the development and maintenance of child and adolescent psychopathology. The active interest by social scentists in the consequences of disciplinary techniques and parental emotion can be traced to three major influences in the developmental field: The focus on learning processes by the early behavioral psychologists, the developmental focus of psychoanalytic theory, and the repeated findings in clinical practice of a high incidence of atypical disciplinary practices in the background of problem children (see Maccoby & Martin, 1983; Maccoby, 1992 for reviews). Early research on patterns and consequences of parent-child interactions generally has found that parental behavior can be subdivided along two broad dimensions: emotional affect (e.g., acceptance-rejection or warmth-hostility) and management or control strategies (e.g., restrictive-permissive or firm control-indulgence) (Becker, 1964; Schaefer, 1965; Schludermann & Schludermann, 1970).

Early studies on the domains of parent behavior, however, were largely based on reports by parent or child. These measures derived from interviews with parents or children are especially subject to criticism because of the indirect character of the data. As both Becker (1964) and Martin (1975) pointed out in their reviews, by the time the actual parent-child interaction has been filtered through the parents' and children's memory of events, their ability for verbal articulation, and through the interviewer's skill in eliciting relevant descriptions, one can at best expect to see only the broad outline of the

phenomena under study. Moreover, recent research has demonstrated significant biases in estimates of relationships between theoretical constructs involving parenting and developmental outcomes based on family reports. For example, child self-report of both parenting practices and own adjustment may be correlated not because of an empirical connection between the two but, rather, because of shared method variance (Bank, Dishion, Skinner, & Patterson, 1990, Lorenz, Conger, Simons, Whitbeck, & Elder, 1991). The use of data from observations of behavior in both laboratory and home settings has been an important advance in overcoming the method variance problem.

Despite the advantages of behavioral observational data, questions arise as to whether the same dimensions of parenting obtained from interviews can be established using observed parent behavior. Moreover, because laboratory or home observations are usually made for a relatively short period of time or on certain limited tasks, observations of parent behavior may sample too few interactional situations to adequately represent the phenomena of interest. In addition, questions also remain as to whether parenting dimensions can be reliably established across different assessment occasions. These issues in part guided the present analyses. The first objective of the present study was to determine whether observational ratings could approximate the domains repeatedly found in parent and child reports and to demonstrate the consistency of the findings across different observational occasions.

Although dimensions of control and emotional affect in parenting are usually distingushed conceptually, affective relations between parent and child are typically

correlated with the use of certain kinds of discipline (Becker, 1964, Schludermann & Schludermann, 1970). For example, the use of praise and inductive reasoning is associated with emotional warmth, and the use of harsh or physical punishment is correlated with hostile emotional affect (Kagan & Moss, 1962). Thus, we are faced with a situation wherein certain techniques of discipline or control and certain dimensions of affect of the parent tend to occur jointly and may have similar consequences for the child. Therefore, a question arises as to how to use most effectively the various domains of parenting in studying relations between parent behavior and child development outcomes. In the present study we evaluate the utility of a second-order construct to cope with problems of non-orthogonality in different parenting dimensions.

Moreover, researchers often suggest that the two broad domains of parent behavior (i.e., affect and control) may have differential effects on development (Becker, 1964). Patterson (1982), in particular, has emphasized the importance of effective family management in controlling antisocial and coercive behaviors by children and in training effective social and academic skills. For others (e.g., Lewis, 1981; Stayton, Hogan, & Ainsworth, 1971), discipline is but a part of the interaction that occurs between parent and child. For these scholars, the effect of firm control on child outcomes may not be as great as some other dimensions such as positive or negative emotional affect. According to these theorists, the emotional tones displayed during parent-child interaction, e.g., warmth-hostility may have a greater impact on child or adolescent development than disciplinary techniques. On the other hand, Baumrind (1971; 1991) has been especially concerned with

typologies of parenting that combine the control and affective dimensions of parenting.

More recent research on the relationship between family interaction and adolescent development generally indicates that various indicators of parent behavior predict adolescent externalizing problems such as antisocial behavior and aggression (Miller, P. A. Cowan, C. P. Cowan, Hetherington, & Clingempeel, 1993; Patterson, 1982; 1992) as well as internalizing problems such as depression and anxiety (Fauber, Forehand, Thomas, and Wierson, 1990; Jacob, 1987). Following this line of inquiry, the third objective of this study was to investigate the predictive validity of different dimensions of observed parent behavior on adolescent externalizing and internalizing problems assessed two years later. More specifically, we expected that parent control strategies were more likely to influence externalizing behaviors and emotional affect internalizing symptoms.

Fourth, although earlier studies using child report of parent behavior such as CRPBI are based on the assumption that a child's perception of his/her parents' behavior may be more relevant to his/her adjustment than objectively assessed parental behavior (Schaefer, 1965b), a question remains as to whether observational data can significantly improve our understanding of family interaction processes over and above child reported data. That is, we asked whether observed parenting contributes unique information that predicts outcomes independent of child reports of parenting. Thus, the following analyses assess whether parent behavior observed at home contributes significantly to the explanation of adolescent externalizing and internalizing problems above and beyond the effect of child perception.

Parent Behavior Codes in the Iowa Family Interaction Rating Scales

The data in the present analyses come from a panel study of rural families called Iowa Youth and Families Project (IYFP). The theoretical and methodological base for the IYFP coding system reflects two major commitments: a) to identify parent-child interaction patterns and processes that are precursors, concomitants, or consequences of social and psychological problems, and b) to study the independent and interdependent effects of these interaction processes in mediating or moderating the influence of external or environmental stressors on child and adolescent development. Thus, we were particularly interested in codes that would enable us to investigate patterns of socialization and interaction that either reduce the risk for developmental problems or that exacerbate social deviance and psychopathological development in children.

The Iowa Family Interaction Rating Scales (Melby, et al. 1989) were used for assessing parent behavior used in the IYFP. The scales used for the present analyses were adapted primarily from the Global Coding Scales developed by E. M. Hetherington and W. G. Clingempeel. The codes were designed to reflect the afore-mentioned two broad dimensions of parenting: discipline and emotional affect. These domains of parenting were expected to affect both problematic and competent adjustment; however, this report addresses only the relationship between childrearing and developmental problems.

The theoretical framework guiding the selection and development of codes was based on the assumptions that (1) parents are persons who set standards and rules and who provide necessary rewards and punishments that inhibit overt deviant behavior and (2) the

affective dimension of parenting such as warmth, responsiveness, and hostility most affects the adolescent's positive or negative sense-of-self. In the present study, 16 codes from the Iowa Family Interaction Rating Scales were used to assess parent behavior. The codes and their definitions are summarized in Appendix A.

Sample and Procedures

Procedures

Families were recruited in 1989 through 34 public and private schools in eight counties in a Midwest state. Names and addresses of seventh graders and their parents and a sibling within 4 years of age were obtained from all schools in communities of 6,500 or less in the identified counties. Families were sent a letter explaining the project and were subsequently contacted by telephone and asked to participate. In 1989, about 78% of the families agreed to be interviewed. Each of the four family member was compensated at a rate of about $10 per hour for his or her time in the study. Families were visited again in 1990 and 1991.

At each of the three data collection waves, interviewers visited each family at home for approximately two hours on each of two occasions. During the first visit, each of the four family members completed a set of questionnaires. During the second visit to the home, which occurred within two weeks of the first, the family members were videotaped as they engaged in several different structured interaction tasks. A trained interviewer began the session by asking each individual to complete independently a short questionnaire designed to identify issues of concern that led to disagreements within the

family (e.g., chores recreation, money, etc.). The family members were then gathered around a table and given a set of cards with questions for them to read and discuss. All four family members were involved in this first task which lasted 35 minutes. The cards for this task asked questions about family life such as performance in school, household chores, and important family events. After explaining the procedures, completing a practice card with the family, and checking the video-recording equipment, the interviewer left the room for another part of the house out of ear-shot of the discussion. The family members were asked to discuss among themselves each of the items listed on the cards and to continue talking until the interviewer returned. The video camera recorded the family's interaction around the issues raised by the task cards. These recorded video tapes were subsequently coded by trained observers according to the Iowa Family Interaction Rating Scales manual. Using this system, observers assigned to each code a score of 1 to 5 based on the extent to which behaviors were evident during the video-recorded interaction (Melby, et al. 1989; Lorenz, Melby, & Skinner, in press; also see Appendix A for names and definition).

Measures of outcome variables

Adolescent internalizing problems. Depression and anxiety subscales from the SCL-90-R (Derogatis, 1983) were used to assess SCL-90-R negative affectivity. The subscales were internally consistent (alpha=.89 for depression and alpha=.87 for anxiety). Likewise, depression and anxiety subscales from NEO-personality inventory (Costa & McRae, 1985) were used to assess NEO-negative affectivity. The internal consistency

alphas were .85 for the depression and .71 for the anxiety subscales from the NEO. Each parent, on a 5-point scale, reported the degree to which their seventh grade child was sad, unhappy, worried, or irritable. These items were summed and fathers' and mothers' reports were combined to form a parent-report of adolescent distress.

Adolescent externalizing problems. Hostile, aggressive, antisocial behaviors also were assessed using four indices. The hostility subscales from the SCL-90-R (alpha=.84) and the NEO (alpha=.71) were used to measure both momentary and more enduring dimensions of a hostile personality. Nine items selected from the Buss and Durkee (1957) hostility scale that most reflect overt aggression were used to assess adolescent antisocial behavior (e.g., when someone makes a rule I don't like, I want to break it, alpha=.86). Twenty-two parent report items from Quay and Peterson's (1983) Revised Behavior Problem Checklist were used to assess adolescent behavior problems. Responses by fathers and mothers were internally consistent (alpha=.94 for both father and mother report) and were combined to create a problem behavior index.

Results

The first set of analyses assesses whether codes for parent behavior can be adequately described by the affect and discipline dimensions of parenting and whether these dimensions are consistently held across time. That is, we investigated whether the observer ratings reflect the same underlying dimensions of parenting across waves of data collection. Factor analyses were performed on the 16 parent behavior codes to determine a minimum number of dimensions necessary to account for the correlations among these

codes. The analyses were conducted for fathers and mothers separately and for each of the three waves of data collection. Each analysis was performed using the principal components method of factor analysis, with factor extraction continuing until the eigenvalue fell below 1.0. Following a preliminary varimax rotation of the initial factor matrix, a promax rotation (an oblique solution) was computed. An oblique solution was sought because previous empirical evidence suggests that dimensions of child-rearing behavior may be correlated (Kagan & Moss, 1962; Schludermann & Schludermann, 1970). Table 1 provides the results of the factor analyses for mothers' parenting behavior.

Table 1 about here

In order to make factor structure similarities more evident, factor weights between +.40 and -.40 are not shown in the Table (+.34 and -.35 if no competing weight). As indicated in Table 1, with the exception of positive reinforcement which loaded on both the warmth/assertiveness and firm/involved dimensions, mother's observed parenting behavior can be effectively grouped under three dimensions: warmth/assertiveness, hostile/harsh, and firm/involved. These three dimensions are consistent with early developmental studies that identified acceptance, psychological control, and firm control as three major dimensions of parenting (Becker, 1964; Schaefer, 1965; Schludermann & Schludermann, 1970; Schwarz, Barton-Henry, & Pruzinsky 1985). More important is the fact that these dimensions held irrespective of the assessment occasion. The same

structure emerged on all three measurement occasions and in each solution only three factors emerged with eigenvalues greater than 1.0.

Table 2 presents the results from the factor analysis for fathers' parenting behavior. For fathers, the factor structure was similar to that obtained for mothers except that weights for inductive reasoning, encourage independence, and positive reinforment for waves 1 and 2 were more highly loaded on the warmth/assertiveness dimension than on the firm/involved dimension. This may indicate that warm and accepting fathers are also more likely to reward positive behavior of their children, to use inductive methods, and to encourage their independent thinking. Fathers also tend to combine these disciplinary skills with firm control when their adolescent offspring became older (9th graders).

Table 2 about here

As indicated earlier, the two basic dimensions of parent behavior are not independent and may be highly correlated. Figure 1 provides the intercorrelations among the three parent behavior dimensions. As show in Figure 1, the three dimensions of parenting, as earlier theory and empirical evidence suggest, do significantly relate to each other, particularly the warmth/assertiveness and firm/involved dimensions ($r = .75$ for fathers and .67 for mothers). Figure 2 presents a second-order factor model for parent behavior that indicates that a second-order factor, which we label nurturant/involved parenting, can effectively summarize the three dimensions.

Figures 1 and 2 about here

The third set of analyses assesses the predictive validity of the second-order construct. As shown in Figure 3, adolescent boys' externalizing and internalizing problems assessed two years later were significantly predicted by observer ratings of fathers' nurturant/involved parenting. Mothers' nurturant involved parenting when children were 7th graders predicts their externalizing problems but not internalizing problems. The analyses in Figure 4 show that girls externalizing symptoms were significantly related to both fathers' (-.28**) and mothers' (β=-.15*) earlier parenting practices. Their internalizing symptoms, however, were only marginally significantly related to fathers' parenting (β=-.15*) but not to mothers' parenting (β=.01).

Figures 3 and 4 about here

Although the second-order parenting factor provided a good data reduction device that enabled us to examine the relationship between general parenting practices and later child developmental outcomes, we wanted to evaluate the predictive power of each specific parenting dimension and to investigate whether the three dimensions were functionally different in terms of their relations with developmental outcomes. Table 3 provides a summary of the structural coefficients (βs) relating the three dimensions to adolescent

outcomes. In general, the firm/involved dimension of parenting was consistently predictive of both developmental outcomes for boys and of externalizing symptoms for girls. Both fathers' and mothers' hostile/harsh behaviors were significant predictors of boys' internalizing and externalizing problems but only mothers' hostile/harsh behavior was found to be related to girls' developmental problems and then only externalizing symptoms. Fathers' warmth/assertiveness was significantly related to girls' externalizing problems but not internalizing symptoms and was only marginally significantly related to both outcomes for boys. Mothers' warmth/assertiveness was only related to boys' externalizing problems. More Interestingly, none of the three dimensions of parent behavior was predictive of girls' internalizing problems.

Tabel 3 about here

The fourth set of analyses assessed the independent and interdependent effects of observed parent behavior on child and adolescent developmental outcomes. Specifically, I wanted to examine the extent to which observed parent behavior contributes to the development and maintenance of adolescent externalizing and internalizing problems above and beyond the effects of adolescents' perception of parent behavior. In Figures 5 and 6, hostile parenting is used to predict externalizing symptoms for the combined sample inasmuch as parenting predicted these problems for both boys and girls. Because the warmth and discipline (firm/involved) constructs are so highly interrelated, they were

combined for these analyses.

As Figures 5 and 6 show, the effects of observed parent behavior (Hostile/Harsh in Figure 5 and Warmth/Discipline in Figure 6) on adolescent externalizing problems remain significant even after adolescent reports of parent behavior were included in the prediction.

Figures 5 and 6 about here

In contrast, when adolescent report of Hostile/Harsh parenting was included in the prediction of adolescent internalizing problems, only adolescent perceptions had significant effects on later internalizing problems (β=.13* for adolescent perception of fathers' behavior; β=.24* for adolescent perception of mothers' behavior, Figure 7). Neither adolescent report (β=-.05) nor observed mothers' warmth and dicipline (β=-.09) was related to later adolescent internalizing problems (Figure 8). Only observers' ratings (β=-.14*), but not adolescent report, of fathers' warmth and discipline (β=-.07) were related to later internalizing problems of adolescents.

Figures 7 and 8 about here

Discussion

In the present study, we were interested in investigating four general questions. First, we asked whether dimensions of affect and control distinguished by using child report can be reliably discriminated using observer ratings. Second, will a higher-order parenting construct best describe the data when parenting dimensions are correlated? Third, we asked whether the separate dimensions of observed parental behaviors function differently in predicting adolescent developmental outcomes such as externalizing and internalizing symptoms. Fourth, do ratings of observed parent behavior significantly improve understanding of the etiology of adolescent internalizing and externalizing symptoms over and above the effects of child perception? We will discuss each of these questions in turn.

First, the results from the factor analyses of fathers' and mothers' behavior across three assessment occasions showed that three dimensions of parent behavior, i.e., firm/involved, hostile/harsh, warmth/assertiveness, consistently emerged for both fathers and mothers across all three measurement occasions. Therefore, our results were consistent with earlier theory and empirical evidence from child and parent reports that affect (including both warm/assertive and hostile/harsh behavior) and discipline (or control) are two general constructs of parenting.

Second, and also consistent with earlier research evidence based on parent or child reports, these two general domains of parenting were correlated. The correlations were so high that it is possible to conceptualize them as belonging to a higher-order construct of parenting, which we labeled nurturant/involved. Moreover, the analyses showed that

observed parent behavior (either estimated as a higher-order construct of nurturant/involved parenting or used as oblique, first-order factors) predicts adolescent developmental outcomes, particularly externalizing symptoms.

The results were consistent with earlier research which found that parent punitiveness predicts child aggression and that restrictive discipline fosters inhibited behavior (Fauber et al., 1990; Miller, et al., 1993; Patterson, 1982; 1992). The analysis using a higher-order construct of parenting was also consistent with earlier empirical evidence that permissiveness combined with hostility maximizes the risk for aggressive, poorly controlled behavior, while restrictiveness combined with hostility maximizes social withdrawal. It is important to point out that the present analyses are very conservative because we use only observers ratings to predict parent- and adolescent-reported outcomes. These results do not capitalize on method variance error which typically inflates correlations between predictor and criterion measures. Moreover, the dependent and independent constructs are measured two years apart, a time lag that should reduce the association between parenting and adolescent outcomes. Thus, the results strongly support a hypothesized association between parenting and maladjustment. Moreover, the results suggest that, when multi-collinearity is a problem that weakens the predictive validity of separate dimensions of parenting, and when a general construct describptive of parenting is of interest, a higher-order parenting factor can provide an effective device for predicting developmental outcomes.

The results from the present analyses also demonstrate the predictive validity of the

separate dimensions of observed parent behavior, particularly of hostile/harsh and firm/involved parenting practices. Consistent with other studies (Fauber, et al. 1990; Miller, et al., 1993; Patterson, 1982), the results of the present study suggest that it is the hostile/harsh and discipline dimensions of parenting that are most predictive of later externalizing problems. Although the results were in the predicted direction, the dimension of warmth/assertiveness functions somewhat differently than the firm/involved and hostile/harsh dimensions of parenting in predicting adolescent outcomes. The relatively weaker relations between warmth/assertive parenting practices and adolescent outcomes may suggest that 1) the effects of this aspect of parenting on adolescent developmental outcomes may be indirect, perhaps linked through adolescent perception; and 2) it is possible that the effects of the warmth/assertive dimension are more interactive than direct, as suggested by Baumrind (1971).

The lack of significant findings relating girls' internalizing problems to the three separate parenting factors identified in the study suggests that internalizing problems may be more labile and subject to fluctuation than externalizing problems. Moreover, one of the analyses comparing behavior and adolescent perception indicates that girls' internalizing problems may be directly affected by their perception of the warmth and closeness of their parent. Another important finding from the present study was that fathers' parenting practices were significantly related to both boys' and girls' externalizing problems and in some instances were a better predictor of developmental problems than mothers' childrearing behavior. This finding provides further evidence for the importance

of fathers in child socialization.

Finally, results from the present study suggest that observed parent behavior contributes unique information that predicts developmental outcomes independent of child reports of parenting, particularly externalizing problems. The findings also suggest that it is possible that parent behavior is only indirectly related to adolescent internalizing symptoms through adolescent perception of parenting.

References

Bank, L., Dishion, T., Skinner, M., & Patterson, G. R. (1990). Method variance in structural equation modeling: Living with "glop". In G. R. Patterson (Ed.), Aggression and depression in family interaction (pp. 247-279). Hillsdale, NJ: Lawrence Erlbaum Associates.

Baumrind, D. (1971). Current patterns of parental autority. Developmental Psychology Monograph. No.1.

Baumrind, D. (1991). Effective parenting during adolescent transition. in P. A. Cowan & E. M. Hetherington (Eds.), Family transitions (pp. 111-163). Hillsdale, NJ: Erlbaum.

Becker, W. C. (1964). Consequences of different kinds of parental discipline. In M. L. Hoffman & L. W. Hoffman (Eds.), Review of child development research (pp. 169-208). New York: Russel Sage.

Buss, A., & Durkee, A. (1957). An inventory for assessing different kinds of hostility. Journal of Consulting Psychology, 21,343-349.

Costa, P. T., & McCrae, R. R. (1985). The NEO personality inventory manual. Orlando, FL: Psychological Assessment Resources, Inc.

Deragatis, L. R. (1983). SCL-90_R administration, scoring, and procedures manual II. Towson, MD.: Clinical Psychometric Research.

Fauber, R., Forehand, R., Thomas, A. M., & Wierson, M. (1990). a Mediational model of the impact of marital conflict on adolescent adjustment in intact and divorced

families: The role of disrupted parenting. Child Development, 61, 1112-1123.

Jocab, T. (1987). Family interaction and psychopathology: Historical overview. In T. Jacob (Ed.) Family interaction and psychopathology. (pp. 1-22). New York and London: Plenum.

Kagan, J., & Moss, H. A. (1962). Birth to maturity. New York: John Wiley.

Lewis, C. C. (1981). The effects of parental firm control: A reinterpretation of findings. Psychological Bulletin, 90, 547-563.

Lorenz, F. O., Conger, R. D., Simons, R. L., Whitbeck, L. B., & Elder, G. H., Jr. (1991). Economic pressure and marital quality: An illustration of the method variance problem in the causal modeling of family processes. Journal of Marriage and Family, 53, 375-388.

Lorenz, F. O., Melby, J., & Skinner, M. (in press). Studying families and lives. In R. D. Conger & G. H. Elder, Jr. (Eds.) Families in a changing society: Coping with economic hardship. New York: Aldine De Gruyter.

Maccoby, E. E. (1992). The role of parents in the socialization of children: An historical overview. Developmental Psychology, 28,1006-1017.

Maccoby, E. E., & Martin, J. A. (1983). Socialization in the context of the family: parent-child interaction. In E. M. Hetherington (Ed.). Handbook of child Psychology. (Vol. 4, pp. 1-101). New York: Wiley.

Martin, B. (1975). Parent-child relations. In F. D. Horowitz (Ed.) Review of child development research (Vol. 4, pp. 463-540). Chicago, IL: University of Chicago

Press.

Melby, J. N., Conger, R. D., Book, R. A., Rueter, M., Lucy, L., Repinski, D., Ahrens, K., Black, D., Brown, D., Huck, S., Mutchler, L., Rogers, S., Ross, J., & Stavros, T. (1989). The Iowa Family Interaction Coding Manual. Unpublished manuscript, Iowa Youth and Families Project, Department of Sociology, Iowa State University, Ames.

Miller, N. B., Cowan, P. A., Cowan, C. P., Hetherington, E. M., & Clingempeel, W. G., (1993). Externalizing in preschoolers and early adolescents: A cross-study replication of a family model. Developmental Psychology, 29,3-18.

Patterson, G. R. (1982). Coersive family process. Eugene, OR: Castalia.

Patterson, G. R., Reid, J. B., Dishion, T. J. (1992). Antisocial boys. Eugene, OR: Castalia.

Quay, H. C., & Peterson, D. R. (1983). Interim Manual for the revised behavior problem checklist. (1st edition). Coral Gables, FL: University of Miami.

Schaefer, E. S. (1965a). Children's report of parental behavior: An inventory. Child Development,36, 417-424.

Schaefer, E. S. (1965b). A configurational analysis of children's report of parent behavior. Journal of Consulting Psychology,29, 552-557.

Schludermann, E., & Schludermann, S. (1970). Replicability of factors in children's report of parent behavior (CRPBI). The Journal of Psychology, 76, 239-249.

Schwarz, J. C., Barton-Henry, M., & Pruzinsky, T. (1985). Assessing child-rearing

behaviors: A comparison of ratings made by mother, father, child, and sibling on the CRPBI. Child Development,56,462-479.

Stayton, D. J., Hogan, R., & Ainsworth, M. D. S. (1971). Infant obedience and maternal behavior: The origins of socialization reconsidered. Child Development, 42, 1057-1069.

Appendix A. Codes used in assessing parent behavior and their definitions

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Hostility (HS): The extent to which hostile, angry, critical, disapproving, or rejecting behavior is directed toward another interactor's behavior, appearance, or personal characteristics.

Angry Coercion (AC): Control attempt that include hostile, threatening, or blaming behavior.

Interrogation (IT): Insistent, systematic questioning designed to solicit specific information or to make a point.

Antisocial (AN): Demonstrations of self-centered, egocentric, acting out, and out-of-control behavior that show defiance, active resistance, insensitively toward others, and lack of constraint. Immaturity, age-inappropriate behaviors.

Harsh Discipline (HD): the extent to which the parent responds to the child's "misbehavior" or violation of specific parental standards through the use of punitive or severe disciplinary techniques, either verbal, e.g., yelling and screaming, or physical, e.g., hitting or punching.

Child monitoring (CM): the extent of the parent's specific knowledge and information concerning the child's life and daily activities. Indicates the extent to which the parent accurately tracks the behaviors, activities, and social involvements of the child.

Parental Influence (PI): the parent's direct and indirect attempts to influence, regulate or control the child's life according to commonly accepted, age-appropriate standards.

Consistent Discipline (CD): the degree of consistency and persistence with which the parent maintains and adheres to rules and standards of conduct for the child's behavior.

Positive Reinforcement (PO): the extent to which the parent responds positively to the child's "appropriate" behavior or behavior that meets specific parental standards.

Inductive Reasoning (IR): the extent to which the parent encourages the child, in a neutral or positive manner, to understand possible consequences of the child's behavior, seeks voluntary compliance, avoids the use of power assertion, and use reasoning to encourage the child to consider the feelings of others.

Encourages Independence (EI): parental demonstrations of trust in and encouragement of the child's independence in thought and actions.

Prosocial (PR): demonstrations of helpfulness, sensitively toward others, cooperation, sympathy, and respectfulness toward others in an age-appropriate manner. Reflects a level of maturity appropriate to one's age.

Assertiveness (AR): the speaker's ability to express him/herself through clear, appropriate neutral and/or positive avenues using an open, straightfoward, self-confident, non-threatening and non-defensive style.

Listener Responsiveness (LR): nonverbal and verbal responsiveness to the verbalizations of the other interactor that indicate attentiveness by the listener.

Communication (CO): the speaker's ability to neutrally or positively express his/her own point of view, needs, wants, etc., in a clear, appropriate, and reasonable manner, and to demonstrate consideration of the other interactor's point of view. The good communicator promotes rather than inhibits exchange of information.

Warmth/Support (WM): expressions of interest, care, concern, support, encouragement, or responsiveness toward another interactor.

Figure Captions

Figure 1. Correlated three dimensions of parent behavior.

Figure 2. A second-order construct of nurturant/involved parenting.

Figure 3. Parent behavior and adolescent boys' externalizing and internalizing problems.

Figure 4. Parent behavior and adolescent girls' externalizing and internalizing problems.

Figure 5. Adolescent externalizing problems predicted by observed and adolescent reported hostile and harsh parenting.

Figure 6. Adolescent externalizing problems predicted by observed and adolescent reported warmth and discipline.

Figure 7. Adolescent internalizing problems predicted by observed and adolescent reported hostile and harsh parenting.

Figure 8. Adolescent internalizing problems predicted by observed and adolescent reported warmth and discipline.

Table 1. Promax Rotated Factor Patterns for Mothers' Behavior

	Warm/Assertive			Hostile/Harsh			Firm/Involved		
	1	2	3	1	2	3	1	2	3
Interrogation				.65	.56	.71			
Hostility				.89	.86	.87			
Harsh discipline				.40	.45	.35			
Antisocial			-.53	.83	.85	.78			
Angry coercion				.78	.81	.78			
Prosocial	.81	.83	.81						
Warmth	.72	.76	.62						
Listener's responsiveness	.79	.70	.71						
Communication	.89	.88	.87						
Assertiveness	.80	.83	.83						
Consistent discipline							.69	.63	.64
Child monitoring							.68	.77	.76
Parental influences							.74	.81	.68
Inductive reasoning			.51				.50	.48	
Encourage independence		.59					.62		.43
Positive reinforcement	.57	.66	.54				.61		.49
Internal Consistency Alpha	.87	.88	.86	.77	.77	.78	.74	.73	.64

Note: Factor weights > .50 were selected; above .35 if no competing loadings on other factors.

Table 2. Promax Rotated Factor Patterns for Fathers' Behavior

	Warm/Assertive			Hostile/Harsh			Firm/Involved		
	1	2	3	1	2	3	1	2	3
Interrogation				.67	.67	.77			
Hostility				.84	.86	.88			
Harsh discipline				.45	.52	.35			
Antisocial				.79	.80	.80			
Angry coercion				.72	.81	.79			
Prosocial	.75	.81	.81						
Warmth	.72	.74	.45						.67
Listener's responsiveness	.78	.71	.73						
Communication	.86	.87	.89						
Assertiveness	.80	.83	.82						
Consistent discipline							.75	.67	.56
Child monitoring							.64	.78	.71
Parental influences							.73	.78	.71
Inductive reasoning	.57	.59	.48						
Encourage independence	.54	.51							.55
Positive reinforcement	.52	.57						.59	.68
Internal Consistency Alpha	.88	.84	.84	.77	.80	.79	.73	.75	.69

Note: Factor weights > .50 were selected; above .35 if no competing loadings on other factors.

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Table 3. Structural Coefficients between Parenting and Child Outcome Constructs

		Externalization		Internalization	
		Boys	Girls	Boys	Girls
Father	Firm/Involved	-.36**	-.24**	-.34**	-.11
	Warm/Assertive	-.15*	-.21**	-.18*	-.13
	Hostile/Harsh	.32**	.13	.25**	.05
Mother	Firm/Involved	-.31**	-.19**	-.20**	-.02
	Warm/Assertive	-.15*	-.13	-.04	.03
	Hostile/Harsh	.27**	.21**	.20**	.13

Note: * is significant at .10 level
** is significant at .05 level

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Figure 1.

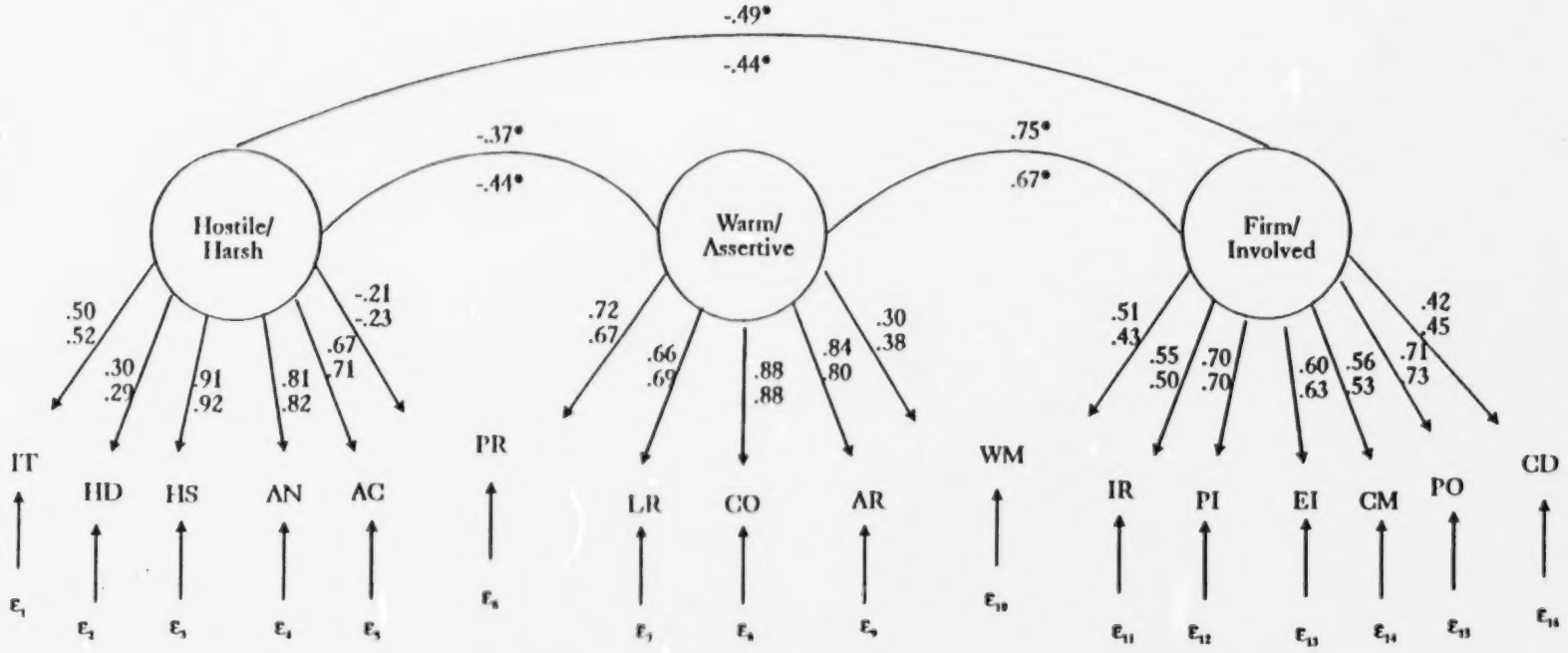
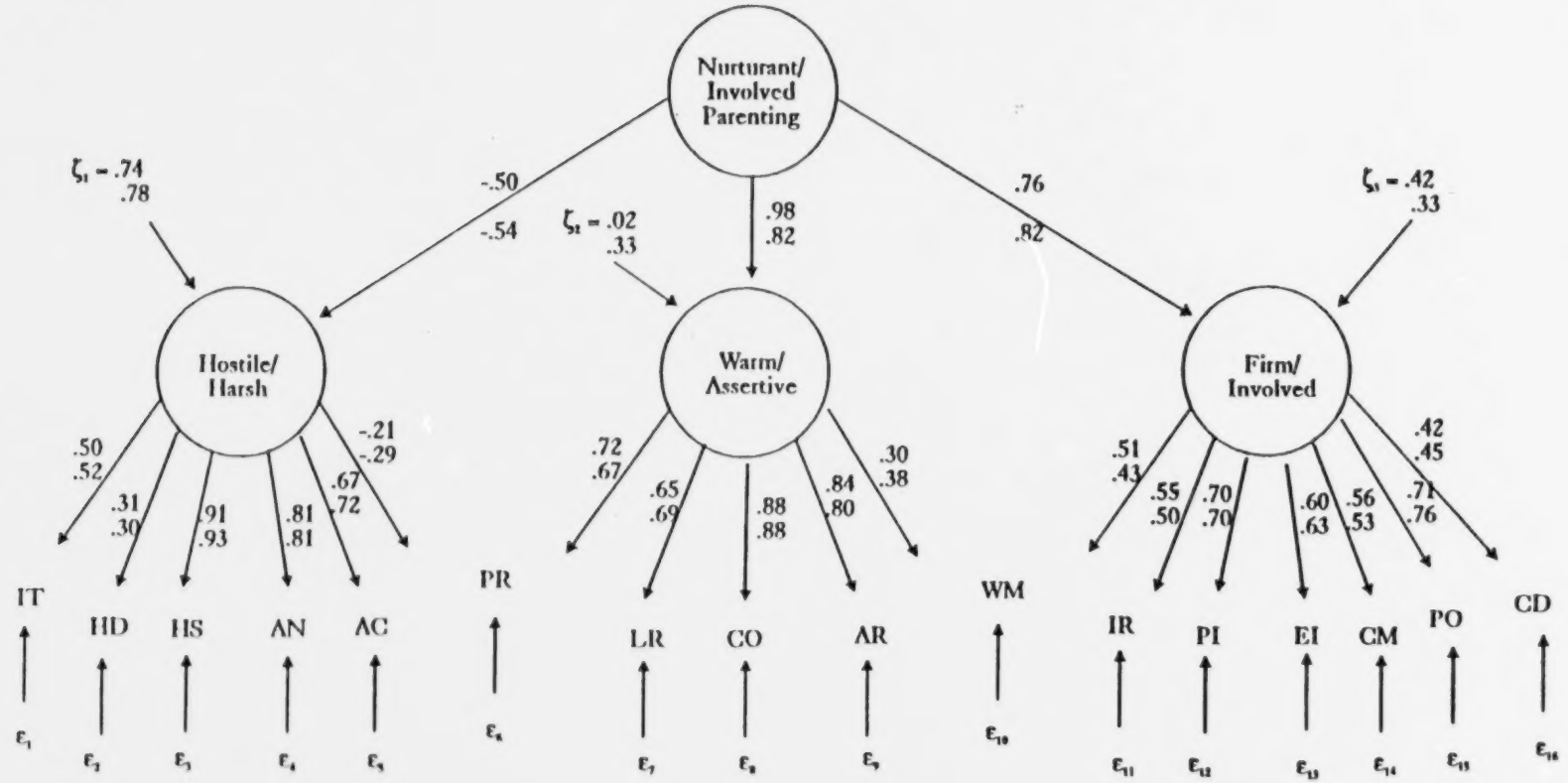

-.49*
-.44*
-.37*
-.44*
.75*
.67*
Hostile/ Harsh
Warm/ Assertive
Firm/ Involved
.50
.52
.30
.29
.91
.92
.81
.82
.67
.71
-.21
-.23
.72
.67
.66
.69
.88
.88
.84
.80
.30
.38
.51
.43
.55
.50
.70
.70
.60
.63
.56
.53
.71
.73
.42
.45
IT
HD
HS
AN
AC
PR
LR
CO
AR
WM
IR
PI
EI
CM
PO
CD
ε1
ε2
ε3
ε4
ε5
ε6
ε7
ε8
ε9
ε10
ε11
ε12
ε13
ε14
ε15
ε16

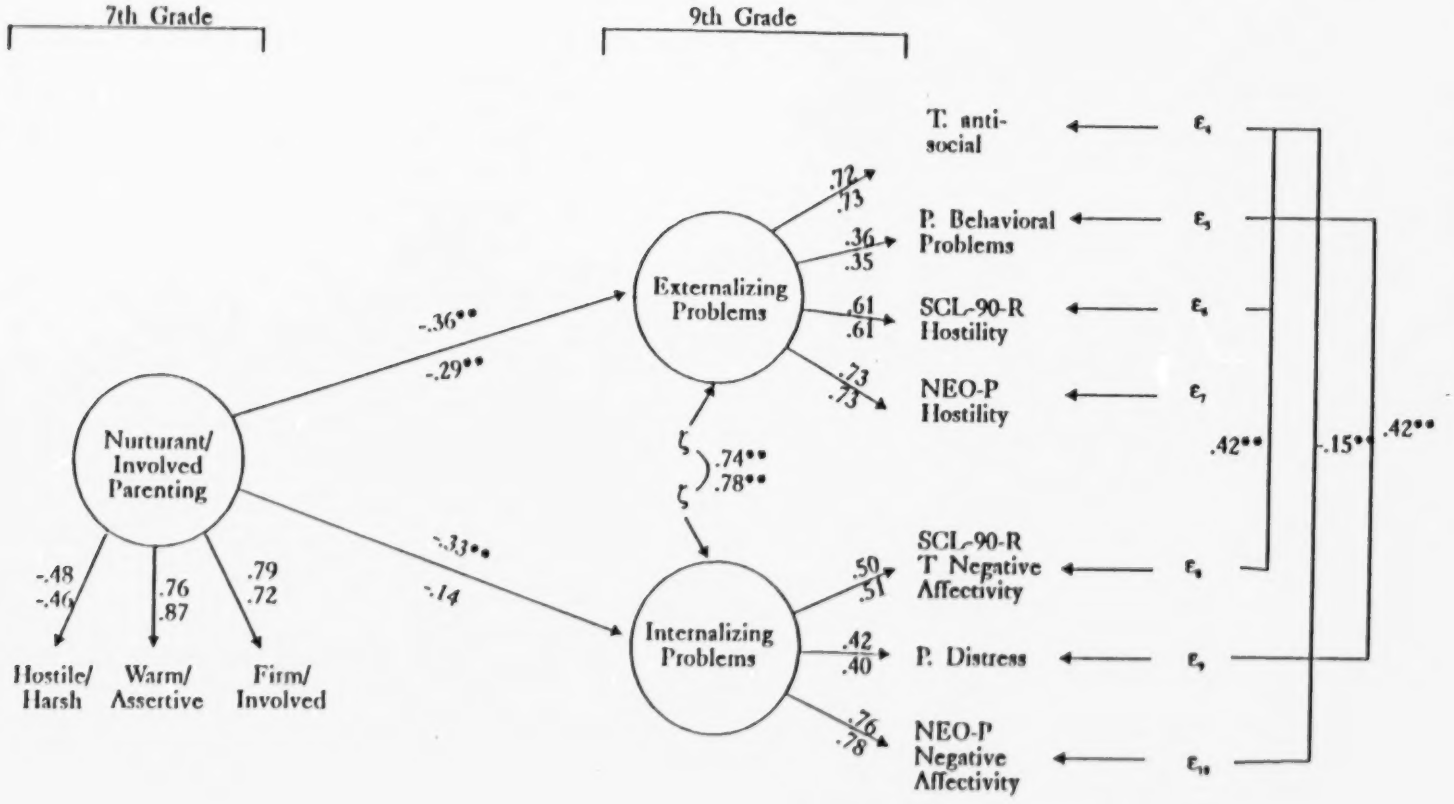
Figure 2.



Father Model (above)
x_3 = 304.44
df = 98
GFI = .913

Mother Model (below)
x_4 = 254.38
df = 98
GFI = .930

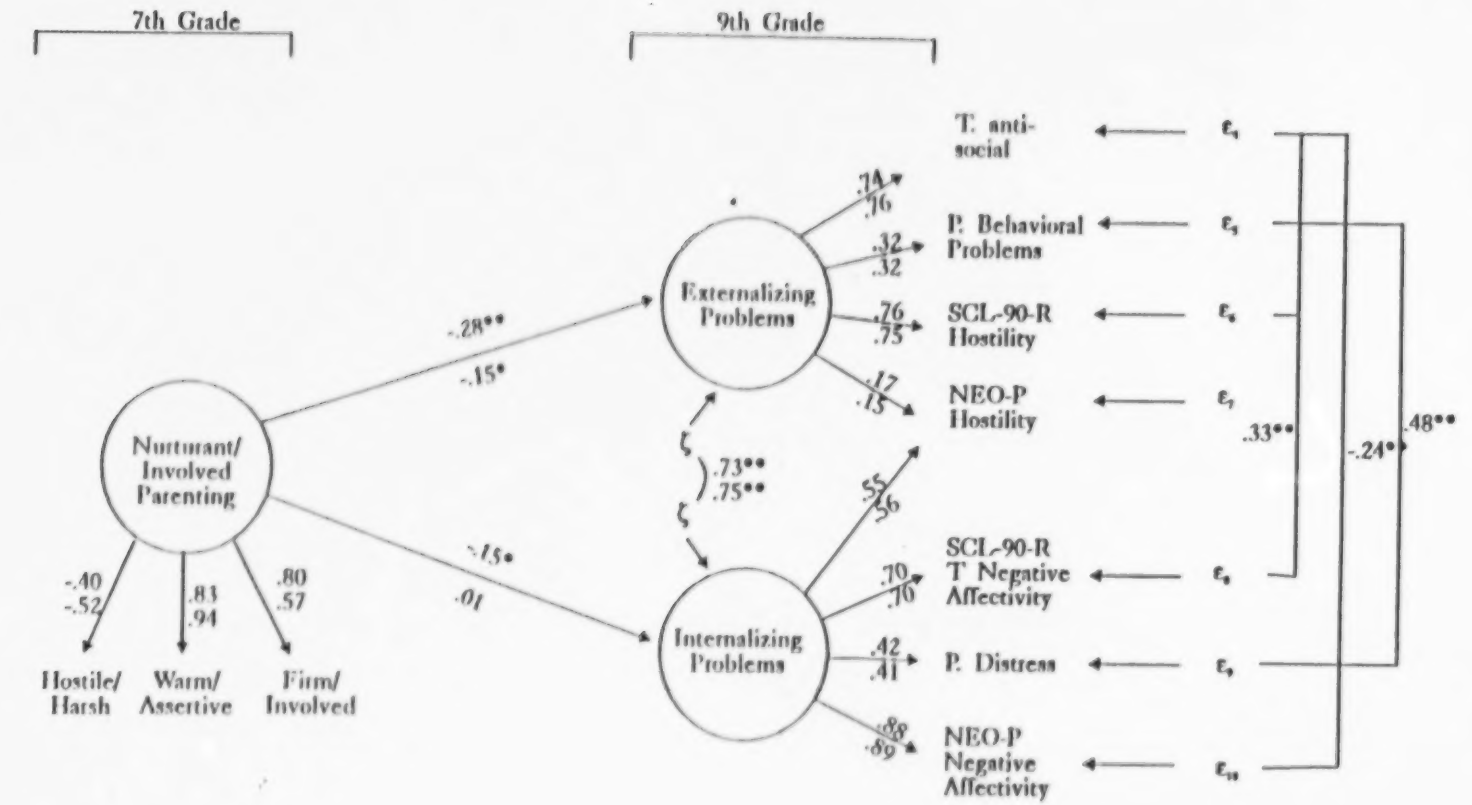
Figure 3.



Mother - Boy (below)
$\chi^2_{(m)}$ = 65.5
GFI = .935
N = 177

Father - Boy (above)
$\chi^2_{(m)}$ = 64.4
GFI = .936
N = 177

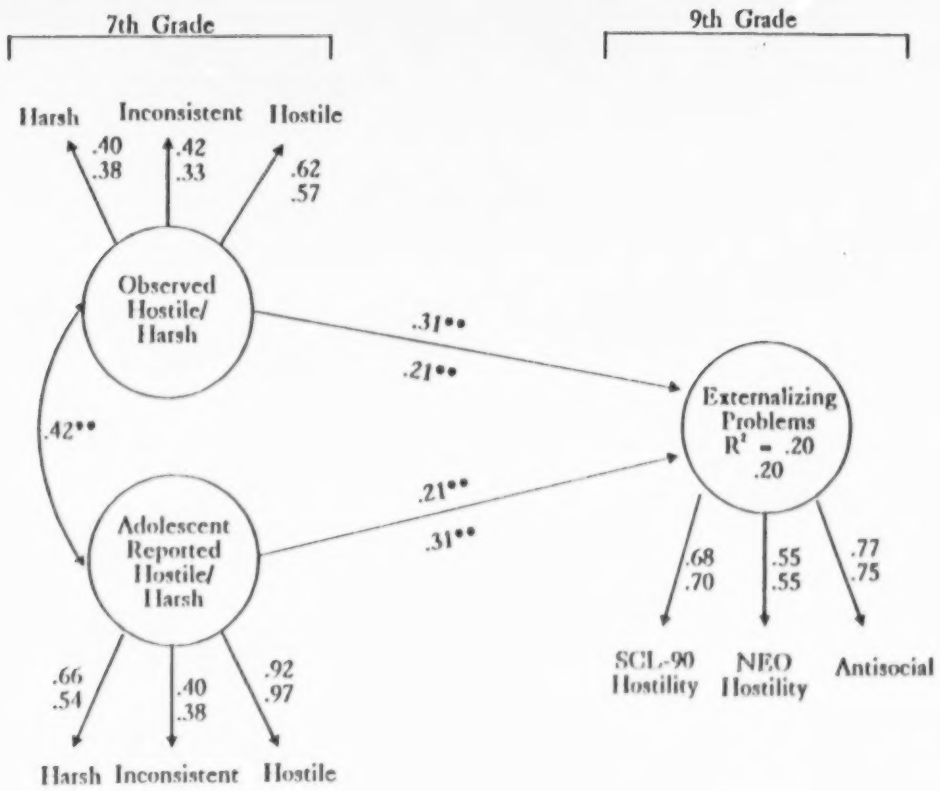
Figure 4.



Mother - Girl (below)
χ^2_{gm} = 51.47
GFI = .955

Father - Girl (above)
χ^2_{gm} = 55.57
GFI = .950

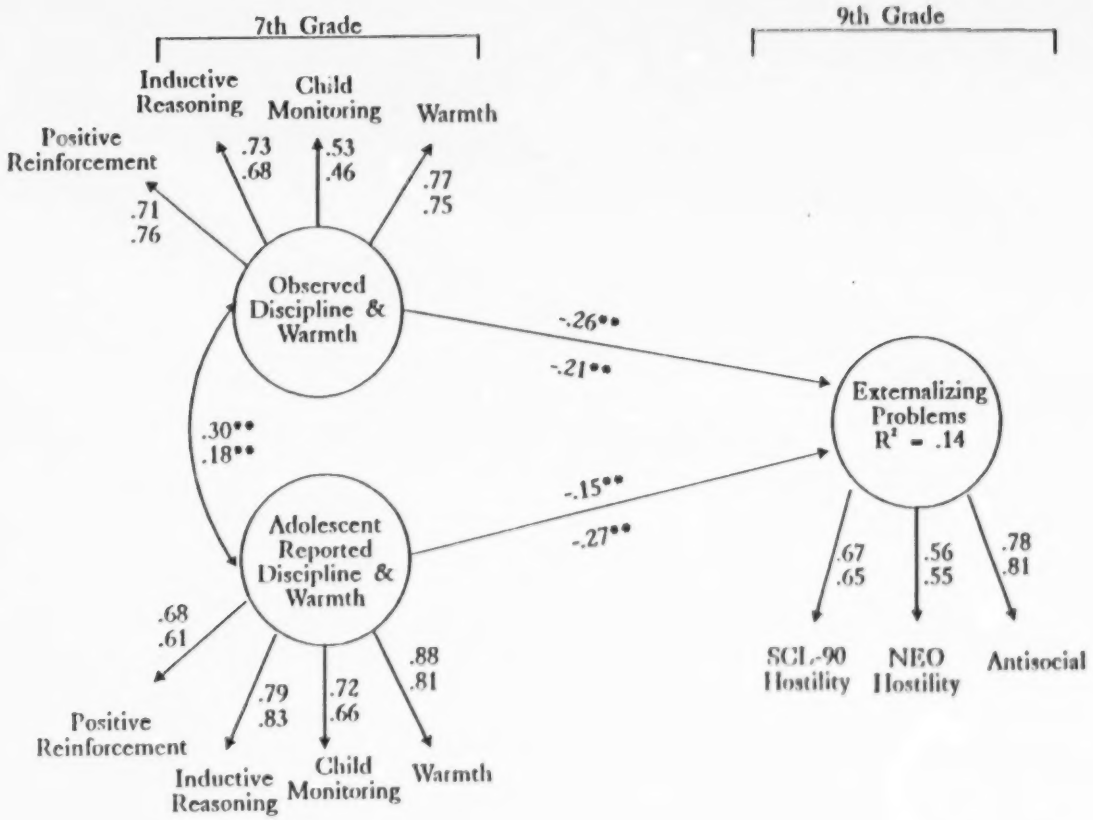
Figure 5.



Father (above)
χ^2_m = 24.93
P = .25
GFI = .986
N = 383

Mother (below)
χ^2_m = 25.46
P = .228
GFI = .986

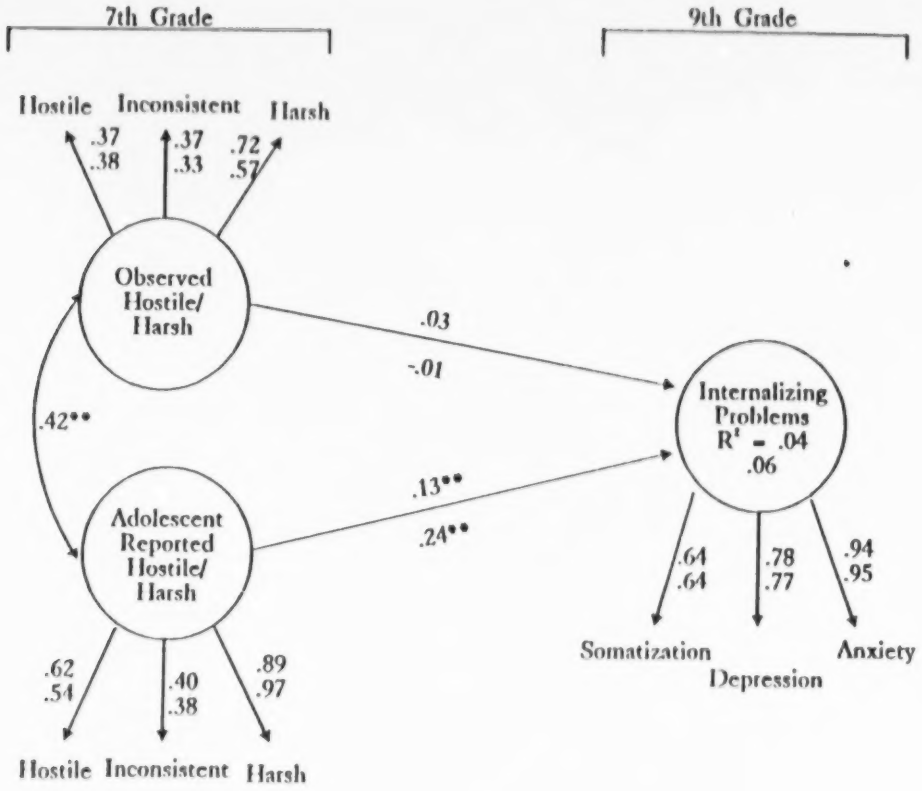
Figure 6.



Father (above)
χ^2_{on} = 51.69
P = .055
GFI = .976

Mother (below)
χ^2_{on} = 51.67
P = .055
GFI = .976

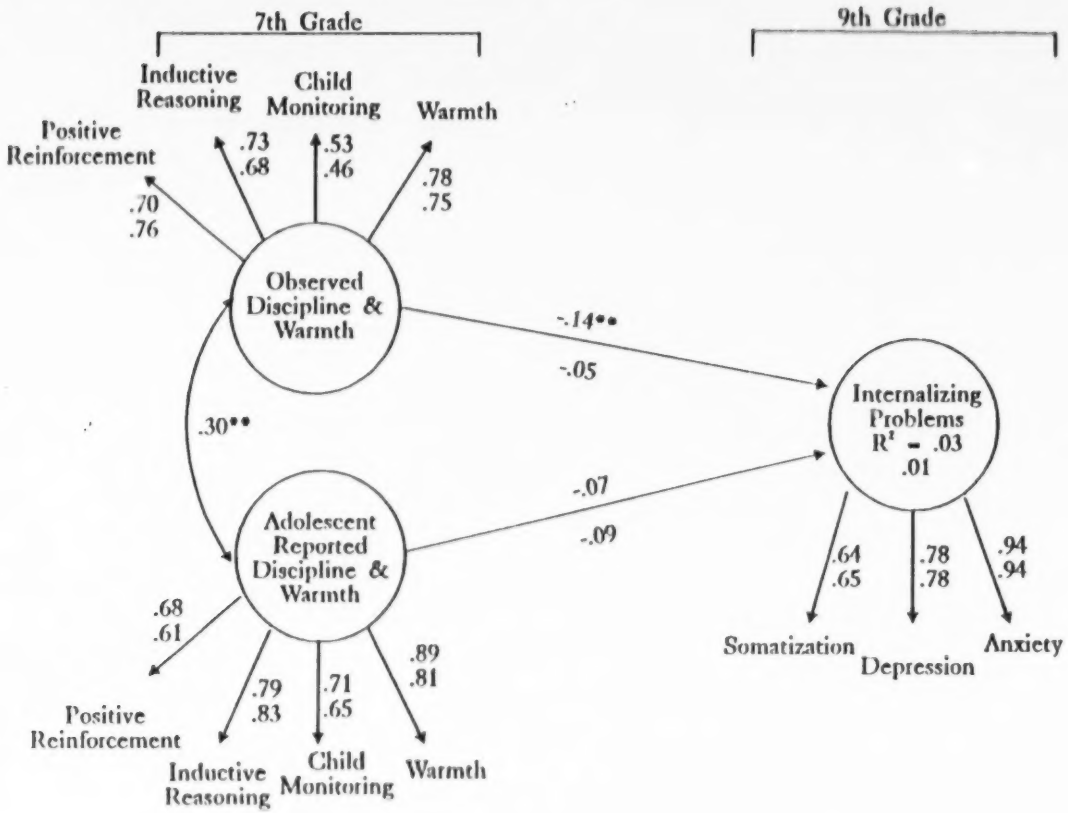
Figure 7.



Father (above)
$\chi^2_{(8)}$ = 12.06
P = .938
GFI = .993

Mother (below)
$\chi^2_{(8)}$ = 17.96
P = .652
GFI = .990

Figure 8.



Father (above)
χ^2_{69} = 58.01
P = .015
GFI = .974

Mother (below)
χ^2_{69} = 49.00
P = .090
GFI = .977